

WHAT IS CLAIMED IS:

1. An apparatus for improving an intermodulation distortion characteristic by controlling a gain of an attenuator in a CDMA (Code Division Multiple Access) mobile terminal,
5 comprising:

a converter for passing input signal components except an IF (Intermediate Frequency) signal component, amplifying the passed input signal to a specific level, converting the amplified signal to a DC (Direct Current) signal, comparing the DC signal with first and second thresholds, and generating a control signal for controlling an operating point of the attenuator by
10 synthesizing the compared result signals.

2. The apparatus as claimed in claim 1, wherein the converter comprises:
a filter for passing the input signal components except the IF signal component;
an IF amplifier for amplifying a signal output from the filter to the specific level;
15 an integrator for converting a signal output from the IF amplifier to the DC signal;
first and second comparators for comparing a signal output from the integrator with the first and second thresholds, respectively; and
a synthesizer for synthesizing signals output from the first and second comparators.

3. The apparatus as claimed in claim 2, wherein the filter is comprised of a notch filter for passing the input signal components except the IF signal component.

4. The apparatus as claimed in claim 2, wherein the filter is comprised of a high-pass filter for passing a high-frequency band signal and a low-pass filter for passing a low-frequency band signal.
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5. The apparatus as claimed in claim 2, wherein the IF amplifier amplifies the signal output from the filter to the specific level which is high enough so that the first and second comparators can compare the level with the first and second thresholds, respectively.
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6. In a CDMA (Code Division Multiple Access) mobile terminal having an attenuator to control an intermodulation distortion characteristic, and a duplexer to feed a received signal to the attenuator which in turn feeds an attenuated signal to a low noise amplifier, the output of which is filtered in an RF filter and the output voltage level of which is controlled
5 by a mixer, the improvement comprising:

a converter, connected to the output of the mixer, for passing input signal components except an IF (Intermediate Frequency) signal component, amplifying the passed input signal to a specific level, converting the amplified signal to a DC (Direct Current) signal, comparing the DC signal with first and second thresholds, and generating a control signal for controlling an
10 operating point of the attenuator by synthesizing the compared result signals.

7. In a CDMA (Code Division Multiple Access) mobile terminal having an attenuator to control an intermodulation distortion characteristic, and a duplexer to feed a received signal to the attenuator which in turn feeds an attenuated signal to a low noise amplifier, the output of which is filtered in an RF filter and the output voltage level of which is controlled
15 by a mixer, the improvement comprising:

a filter, connected to the output of the mixer, for passing the input signal components except the IF signal component;

an IF amplifier for amplifying a signal output from the filter to the specific level;

20 an integrator for converting a signal output from the IF amplifier to a DC signal;

first and second comparators for comparing a signal output from the integrator with the first and second thresholds, respectively; and

a synthesizer for synthesizing signals output from the first and second comparators.